| INIE   | RNATIONAL SEA  | RCHING AUTHO        | ORITY   |   | 5.07                                      |  |
|--|--|---------------------|---|---|---|--|
| To:  |  |                     |   | PCT  WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (PCT Rule 43 <i>bis</i> .1) |   |  |
|  | see form   | PCT/ISA/220         |   |   |   |  |
|  |  |                     |   | Date of mailing (day/month/year) se   | ee form PCT/ISA/210 (second sheet)        |  |
|  | Applicant's or agent's file reference see form PCT/ISA/220   |                     |   | FOR FURTHER ACTION See paragraph 2 below  |   |  |
|  | rnational application<br>T/CH2004/00050  |                     | International filing date (day/month/year) 13.08.2004 |   | Priority date (day/month/year) 18.08.2003 |  |
|  | rnational Patent Clas<br>7F5/06  | sification (IPC) or | both national classification                          | and IPC   |   |  |
|  | licant<br>/AUDAN SA  |                     |   |   |   |  |
| 2.   | <ul> <li>Box No. I Basis of the opinion</li> <li>Box No. II Priority</li> <li>Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability</li> <li>Box No. IV Lack of unity of invention</li> <li>Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement</li> <li>Box No. VI Certain documents cited</li> <li>Box No. VII Certain defects in the international application</li> <li>Box No. VIII Certain observations on the international application</li> </ul> |                     |   |   |   |  |
| For further options, see Form PCT/ISA/220.  3. For further details, see notes to Form PCT/ISA/220. |  |                     |   |   |   |  |

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## WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No. PCT/CH2004/000505

10/568831 APS Rec'd PCT/PTO 17 FFR 2006

|    |   | IAP5 Rec'd PCT/PTO 17 FEB 2006   |  |  |  |
|----|---|--|--|--|--|
| _  | Box N   |  |  |  |  |
| 1. | <ol> <li>With regard to the language, this opinion has been established on the basis of the international application in<br/>the language in which it was field, unless otherwise indicated under this item.</li> </ol> |  |  |  |  |
|    | la  | his opinion has been established on the basis of a translation from the original language into the following nguage , which is the language of a translation furnished for the purposes of international search under Rules 12.3 and 23.1(b)).   |  |  |  |
| 2. |   | egard to any <b>nucleotide and/or amino acid sequence</b> disclosed in the international application and sary to the claimed invention, this opinion has been established on the basis of:   |  |  |  |
|    | a. type   | e of material:   |  |  |  |
|    |   | a sequence listing   |  |  |  |
|    |   | table(s) related to the sequence listing   |  |  |  |
|    | b. forn   | nat of material:   |  |  |  |
|    |   | in written format  |  |  |  |
|    |   | in computer readable form  |  |  |  |
|    | c. time   | e of filing/furnishing:  |  |  |  |
|    |   | contained in the international application as filed.   |  |  |  |
|    |   | filed together with the international application in computer readable form.   |  |  |  |
|    |   | furnished subsequently to this Authority for the purposes of search.   |  |  |  |
| 3. | ha<br>Co  | addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto as been filed or furnished, the required statements that the information in the subsequent or additional opies is identical to that in the application as filed or does not go beyond the application as filed, as oppropriate, were furnished. |  |  |  |

4. Additional comments:

| Box No. II P |  | Priority  |  |  |  |  |
|--------------|--|---|--|--|--|--|
| 1. 🛭         | ☐ The following document has not been furnished: |   |  |  |  |  |
|              | $\boxtimes$                                      | copy of the earlier application whose priority has been claimed (Rule 43bis.1 and 66.7(a)).   |  |  |  |  |
|              |  | translation of the earlier application whose priority has been claimed (Rule 43bis.1 and 66.7(b)).  |  |  |  |  |
|              | Conse<br>nevert                                  | quently it has not been possible to consider the validity of the priority claim. This opinion has heless been established on the assumption that the relevant date is the claimed priority date.  |  |  |  |  |
| 2. 🗆         | has be   | pinion has been established as if no priority had been claimed due to the fact that the priority claim ten found invalid (Rules 43 <i>bis</i> .1 and 64.1). Thus for the purposes of this opinion, the international ate indicated above is considered to be the relevant date. |  |  |  |  |
| 3. Ad        | 3. Additional observations, if necessary:        |   |  |  |  |  |

| Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability  |   |       |                                   |  |  |  |
|---|---|-------|-----------------------------------|--|--|--|
| The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non obvious), or to be industrially applicable have not been examined in respect of: |   |       |                                   |  |  |  |
|   | the entire international application,   |       |                                   |  |  |  |
| ×   | claims Nos. 3   |       |                                   |  |  |  |
| be  | because:  |       |                                   |  |  |  |
|   | the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (specify):   |       |                                   |  |  |  |
|   | the description, claims or drawings (indicate particular elements below) or said claims Nos. are so unclear that no meaningful opinion could be formed (specify):   |       |                                   |  |  |  |
|   | the claims, or said claims Nos. are so inadequately supported by the description that no meaningful opinion could be formed.  |       |                                   |  |  |  |
| $\boxtimes$   | no international search report has been established for the whole application or for said claims Nos. 3   |       |                                   |  |  |  |
|   | the nucleotide and/or amino acid sequence listing does not comply with the standard provided for in Annex C of the Administrative Instructions in that:   |       |                                   |  |  |  |
|   | the written form  |       | has not been furnished            |  |  |  |
|   |   |       | does not comply with the standard |  |  |  |
|   | the computer readable form  |       | has not been furnished            |  |  |  |
|   |   |       | does not comply with the standard |  |  |  |
|   | the tables related to the nucleotide and/or amino acid sequence listing, if in computer readable form only, do not comply with the technical requirements provided for in Annex C-bis of the Administrative Instructions. |       |                                   |  |  |  |
|   | See separate sheet for further  | detai | Is                                |  |  |  |

Box No. V Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. Statement

Novelty (N)

Yes: Claims

1,2,4-7

No: Claims

No:

Inventive step (IS)

Yes: Claims

Claims

1,2,4-7

Industrial applicability (IA)

Yes: Claims

1,2,4-7

No: Claims

2. Citations and explanations

see separate sheet

Box No. VII Certain defects in the international application

The following defects in the form or contents of the international application have been noted:

see separate sheet

## Re Item V

Reasoned statement with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

 The process according to present claims 1, 2 and 4 differs from the prior art, represented by

D1: US-A-2 712 546 (HUBERT HUNTER WILLIAM ET AL) 5 July 1955 (1955-

07-05)

D2: US-A-2 848 472 (COTTLE DELMER L) 19 August 1958 (1958-08-19)

in the basis material R<sub>3</sub>Al<sub>2</sub>X<sub>3</sub> which is not mentioned in the prior art.

Accordingly the subject-matter of present claims 1, 2 and 4 is novel pursuant to Article 33(2) PCT.

2) As mentioned at present page 1, lines 16 and 17, the present problem was to find a cheap efficient process. However, looking at the prior art (cf. examples 1), it becomes evident that the prior art processes (which are well known since decades) obviously are already very cheap and efficient. The fact the applicant uses R<sub>3</sub>Al<sub>2</sub>X<sub>3</sub> as complicated basic material appears to make the process less cheap and less efficient.

Accordingly the problem as stated by the applicant has not been solved, therefore no inventive step according to Article 33(3) PCT can be acknowledged.

As regards present claims 5 and 6, the applicant argues (cf. present page 4, lines 14-16 that the present process increases the proportion of the compounds of formula I which is not possible by US-A-5 707 961 (BAJGROWICZ JERZY A ET AL) 13 January 1998 (1998-01-13) [D3]. However, looking at D3, column 3, lines 8-14 and column 6, lines 37-54 it appears to be obvious that the cyclisation which the only subject of present claims 5 and 6 can be easily done by the addition of phosphoric acid, no particular problem can be recognized.

Accordingly, without a clear proof a superior effect over the prior art, which is not present at the moment, novelty can be formally acknowledged (Article 33(2) PCT), but the subject-matter of present claims 5 and 6 does not involve an inventive step

## WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY (SEPARATE SHEET)

International application No.

PCT/CH2004/000505

with regard to Article 33(3) PCT.

## Re Item VII

Certain defects in the international application

1) D1-D2 which represent a relevant prior art should be referred to in the description in accordance to Rule 5(1)(a)(ii) PCT.